

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-307497

(43)Date of publication of application : 22.11.1996

(51)Int.Cl.

H04M 1/02

H04Q 7/32

H04Q 7/38

H04M 11/00

H04N 1/00

(21)Application number : 07-104472

(71)Applicant : SANYO ELECTRIC CO LTD

(22)Date of filing : 27.04.1995

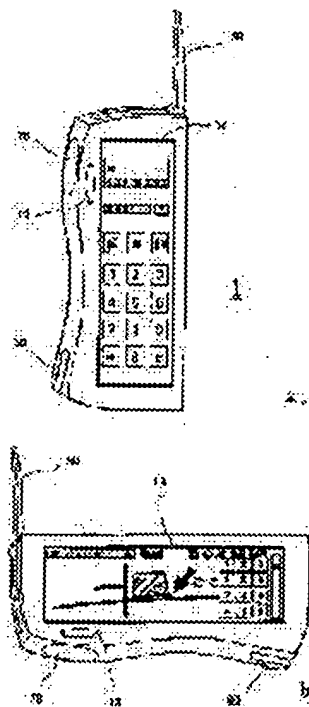
(72)Inventor : UCHIKAWA TAKESHI

(54) TELEPHONE SET WITH DISPLAY FUNCTION

(57)Abstract:

PURPOSE: To give a structure to have a larger display part in a telephone set with display function.

CONSTITUTION: A large display part 12 is provided in the front of the body of a telephone set with display function, and a speaker 70 and a microphone 60 are provided on the side face. The side face provided with the speaker 70 and the microphone 60 is formed into a curved surface like S. The large display part 12 can be provided in the front, and transmission/reception is easy on the side face by the curved surface.



LEGAL STATUS

[Date of request for examination]

05.11.1999

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or

application converted registration]

[Date of final disposal for application]

[Patent number] 3373972

[Date of registration] 22.11.2002

[Number of appeal against examiner's
decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] Telephone with a display function characterized by preparing both the voice playback section and the voice input section in the side face adjacent to this transverse plane while displaying the predetermined information on transmission and reception, having the display which can carry out alter operation of the user, the voice playback section which reproduces the received speech information, and the voice input section which inputs the speech information to transmit and preparing said display in the transverse plane of a body.

[Claim 2] Telephone with a display function characterized by to prepare both the voice playback section and the voice-input section in the side face which touched this transverse plane and curved S characters while the predetermined information on transmission and reception is displayed, and a user has the display which can carry out alter operation, the voice playback section which reproduces the speech information which receives, and the voice input section which inputs the speech information which transmits and prepares said display in the transverse plane of a body.

[Claim 3] Telephone with a display function of the claim characterized by preparing said voice playback section near the heights curved surface of said side face which curved S characters according to claim 2.

[Claim 4] Said side face which curved S characters is the telephone with a display function of the claim characterized by being the side face of the longitudinal direction of a display according to claim 2 to 3.

[Claim 5] Telephone with a display function characterized by the ability to input and display image information on said display, and transmit and receive the image information.

[Claim 6] Telephone with a display function of the claim characterized by forming the lid for exposing only the field where said display was decided according to claim 1 to 5.

[Claim 7] Telephone with a display function of the claim characterized by equipping a body with the antenna section which sends and receives a wireless electric wave, and being able to deliver and receive information by wireless according to claim 1 to 7.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the telephone which prepared the large-sized screen. It is related with the portable telephone with facsimile which has transmission, reception, or the transceiver function of facsimile especially. *transceiver*

[0002] Moreover, it can radiocommunicate, between the same devices can be used also for the thing about home use, place-of-business internal use, the object for the public, and PHS (personal handy phone system) used widely, and it is effective also in the communication link between terminals.

[0003]

[Description of the Prior Art] Conventionally, it was difficult to carry out one apparatus of the portable telephone with facsimile according to problems, such as magnitude, and it became separate [the facsimile section and the telephone section], the acoustic coupler or the electric connector was performing as an interface, and the form became large, and it was very user-unfriendly.

[0004] moreover -- although there is a handicap data terminal which read and had a write-in function -- facsimile -- a complicated image [like] is not read, and since it was a key objective to read a bar code, the reading section did not need a big tooth space.

[0005] Furthermore, it had become a problem whether the need of the image-sensors section is carried out, and what we do with the arrangement so that facsimile might transmit an image and a certain amount of magnitude (A4 version -A6 edition etc.) could usually be read.

[0006] Then, a facsimile function is prepared in a cellular phone at JP,4-278766,A (H04M 11/00), and the portable telephone with facsimile which attained the thin shape/miniaturization is proposed.

[0007] The appearance perspective view of this conventional example is shown in drawing 6.

[0008] The keyboard 2 containing various input keys or a dialing key is arranged on the front face of a case 1. Moreover, while the reading section 3 of a manuscript is formed in the right lateral of this case 1, the write-in section 4 which creates hard copy and which was shown by the dotted line is formed in the left lateral. Furthermore, while an antenna 5 is arranged in the top side of this case 1, the loudspeaker 7 the microphone 6 for transmission as the voice input section (henceforth a microphone) which inputs the voice (information) which transmits, and for the receivers as the voice playback section which reproduces the voice (information) which received as voice is arranged in this front face.

[0009] By this, the constructional arrangement of an internal electrical circuit, and the reading section or the write-in section did not lap, but the thin shape/miniaturization was possible.

[0010] However, since the write-in section was prepared, the hot printing tape and the thermal paper were needed, these were articles of consumption, and had the need of exchanging, and the activity was troublesome. Moreover, checking the image information which was incorporated by the body or was memorized is printing out specially, and it needed to be performed.

[0011] Then, as shown in drawing 7, the portable telephone with facsimile which formed the display 11 is known. This display 11 has thin things, such as liquid crystal and a plasma display. This display 11 can be folded up now on keyboard 2'.

[0012] Thus, by forming a display 11, this can display the received picture signal and the read picture signal, and can check the contents.

[0013]

[Problem(s) to be Solved by the Invention] However, in the conventional portable telephone with facsimile, the structure for print-out, the form for the output, etc. were needed, and the maintenance was very troublesome. Then, even if it omits the output section and prepares only a display, it may be difficult to check the detail of image information, since this viewing area is narrow, and in order for a user to check a detail, the need of printing out comes out.

[0014] Moreover, since the display is arranged near the microphone for transmission, it may become dirty busy.

[0015] Then, this invention offers the structure for solving this fault.

[0016]

[A means to solve invention] It offers the telephone with a display function characterized by to prepare both the voice playback section and the voice-input section in the side face adjacent to this transverse plane while this invention displays the predetermined information on transmission and reception, is equipped with the display which can carry out alter operation of the user, the voice playback section which reproduces the received speech information, and the voice-input section which inputs the speech information to transmit and prepares said display in the transverse plane of a body.

[0017] Moreover, this invention offers the telephone with a display function characterized by to prepare both the voice playback section and the voice input section in the side face which touched this transverse plane and curved S characters while the predetermined information on transmission and reception displays, and a user has the display which can carry out alter operation, the voice playback section which reproduces the speech information which receives, and the voice input section which inputs the speech information which transmits and prepares said display in the transverse plane of a body.

[0018]

[Function] This invention prepares a microphone and a loudspeaker in the side face adjacent to the transverse plane in which the display was prepared.

[0019]

[Example] The appearance perspective view of the 1st example of this invention is shown in drawing 1. The same sign is attached to the same part as the conventional example, and explanation is omitted. This drawing a is this drawing b at the time of facsimile at the time of a telephone.

[0020] Moreover, drawing 2 is the external view of the 1st example, and a left side view and this drawing b of this drawing a are front views.

[0021] A microphone 60 and a loudspeaker 70 have the same function as the conventional example, and are prepared in the side face which curved in the S character mold to the display 12. Right above of the antenna 50 is carried out in the longwise direction of a body at the time of telephone use, and it carries out right above to the longitudinal direction of a body at the time of facsimile use.

[0022] Facsimile (it is called Following FAX)/telephone carbon button 13 is formed near a display 12, and a FAX function and a telephone function are switched by actuation of this carbon button 13.

[0023] A display 12 consists of the 1st side which is in the shorter side of the A5 version, abbreviation, etc. by carrying out, and has die length, and its 2nd side shorter than the 1st side.

[0024] Drawing 3 shows the screen of the display which consists of LCD displays with a digitizer. The display screen at the time of a telephone and this drawing b of this drawing a are the display screens at the time of FAX.

[0025] The telephone number sent or received as the telephone display screen of this drawing a, Telephone [the ten key 22 for performing the display window 21 which displays the information showing a transceiver condition, and call origination actuation, and], or The speaking key 23 and message to receive The cutting key 24 to intercept and various change-overs The key of the Help key 28 grade on which the transceiver key 26 operated in case a menu screen key 25, and the terminal and radio of the same specification to perform are carried out, the telephone directory key 27 which calls the telephone directory which was registered beforehand, and which can be reached and registered, the

usage which responded then are displayed is displayed on LCD. By operating the key, a digitizer detects the location and each function is realized.

[0026] The FAX display screen of this drawing b operates FAX / telephone carbon button 13 mentioned above, is choosing FAX and is displayed. Preservation key 2a which memorizes the received data by which FAX transmission was carried out in the display screen, Return to the condition display modification key 2b and before [which sets up expansion/contraction / one] being inputted, or Elimination key 2d which switches the mode which eliminates the FAX information as which the input in input means, such as clear-key 2c which clears the displayed FAX information, and an input pen which is not illustrated, was displayed, and input mode, There is 2f of FAX displays which show the page of the displayed FAX information and indicate FAX mode to be page key 2e which performs a page switch.

[0027] moreover, it transmits to the center section of this FAX display screen -- it is -- it is -- the received FAX information is displayed. And it is superimposed with the various key displays mentioned above, and it is also possible to be displayed, to eliminate the display of ten key 22 grade and to display only FAX information.

[0028] And like drawing 4 , it will reduce to the A5 version, the image of the A4 version will be displayed on a viewing area, and all the directions of a shorter side of the A4 version will be displayed. The field surrounded by the thick wire is displayed on the display 12 mentioned above in this drawing, that is, only a part is displayed, it is scroll bar 2g for scrolling, and it can display [the direction of a long side can scroll the display screen up and down, and] the field of the dotted line which is not displayed.

[0029] Although this example shows what can display one fourth of the die length of the direction of a long side of the A4 version, it is not limited to especially this die length, and although it may be short, effectiveness is shown more in a display by the longer one.

→ [0030] Next, the case where a user transmits and receives a telephone is explained using drawing 5 . Since the LCD display with a digitizer was prepared in the transverse plane, if it must be made a flat surface and a loudspeaker and a microphone are in the same side, it will become difficult to bring the field close to the condition of making a face fitting, and to telephone it.

→ [0031] Therefore, this invention has formed the microphone 60 and the loudspeaker 70 in the side face. The curve of this side face is a human-engineering-serpentine curve which matched the size of people's face, and a configuration most. That is, the part of a loudspeaker 70 is at the abbreviation top of the curve of a convex, and the part of a microphone 60 crosses the top-most vertices of the curve of concave, is on the curve which goes to the following heights, and serves as a curve to which a

→ loudspeaker 70 tends [especially] to contact a user's lug.

[0032] Therefore, in use of this cellular phone, it can be smoothly used like drawing 5 .

[0033] In this example, on the whole, the display 12 was covered and the protective cover (lid) 14 it was made to appear only as for the display window 21 of a display 12 is formed in the case 1. Since this protective cover 14 has covered most displays, it decreases extremely that its a user sways to a display in the case of telephone use.

[0034]

[Effect of the Invention] This invention has not formed the display 12 in the same field as a microphone 60 and a loudspeaker 70. Therefore, the large display 12 can be taken.

[0035] Moreover, the microphone and the loudspeaker are arranged on the side face which carried out the S character curved surface, and since it is arranged so that a loudspeaker may approach a lug and a microphone may approach opening most in case a user uses it, it is easy to use them.

[0036] and -- the direction of a display -- a user -- holding -- hard -- a long time -- using it -- **** -- if -- the fatigue -- it may come out -- although -- a loudspeaker 70 and a microphone 60 -- a side face -- **** (ing) -- **** -- since -- a side face -- as width of face is held, it can be telephoned, and since grip width of face is narrow, the fatigue at the time of a user's use can be reduced sharply.

[0037] Moreover, since a display does not become dirty by covering a display 12 on the whole and preparing the protective cover (lid) it was made to appear only as for a display window 21, the clean nature of a display is maintained.

[0038] Furthermore, if it uses for telephone with a FAX function, since it will not carry out hard copy, using the output section of FAX as a display, the need of the device for the hard copy is not carried out.
[0039] And the display is effective in being able to take greatly, since the microphone and the loudspeaker were prepared in the side face, and a user recognizing FAX information.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL FIELD

[Industrial Application] This invention relates to the telephone which prepared the large-sized screen. It is related with the portable telephone with facsimile which has transmission, reception, or the transceiver function of facsimile especially.

[0002] Moreover, it can radiocommunicate, between the same devices can be used also for the thing about home use, place-of-business internal use, the object for the public, and PHS (personal handy phone system) used widely, and it is effective also in the communication link between terminals.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art] Conventionally, it was difficult to carry out one apparatus of the portable telephone with facsimile according to problems, such as magnitude, and it became separate [the facsimile section and the telephone section], the acoustic coupler or the electric connector was performing as an interface, and the form became large, and it was very user-unfriendly.

[0004] moreover -- although there is a handicap data terminal which read and had a write-in function -- facsimile -- a complicated image [like] is not read, and since it was a key objective to read a bar code, the reading section did not need a big tooth space.

[0005] Furthermore, it had become a problem whether the need of the image-sensors section is carried out, and what we do with the arrangement so that facsimile might transmit an image and a certain amount of magnitude (A4 version -A6 edition etc.) could usually be read.

[0006] Then, a facsimile function is prepared in a cellular phone at JP,4-278766,A (H04M 11/00), and the portable telephone with facsimile which attained the thin shape/miniaturization is proposed.

[0007] The appearance perspective view of this conventional example is shown in drawing 6.

[0008] The keyboard 2 containing various input keys or a dialing key is arranged on the front face of a case 1. Moreover, while the reading section 3 of a manuscript is formed in the right lateral of this case 1, the write-in section 4 which creates hard copy and which was shown by the dotted line is formed in the left lateral. Furthermore, while an antenna 5 is arranged in the top side of this case 1, the loudspeaker 7 the microphone 6 for transmission as the voice input section (henceforth a microphone) which inputs the voice (information) which transmits, and for the receivers as the voice playback section which reproduces the voice (information) which received as voice is arranged in this front face.

[0009] By this, the constructional arrangement of an internal electrical circuit, and the reading section or the write-in section did not lap, but the thin shape/miniaturization was possible.

[0010] However, since the write-in section was prepared, the hot printing tape and the thermal paper were needed, these were articles of consumption, and had the need of exchanging, and the activity was troublesome. Moreover, checking the image information which was incorporated by the body or was memorized is printing out specially, and it needed to be performed.

[0011] Then, as shown in drawing 7, the portable telephone with facsimile which formed the display 11 is known. This display 11 has thin things, such as liquid crystal and a plasma display. This display 11 can be folded up now on keyboard 2'.

[0012] Thus, by forming a display 11, this can display the received picture signal and the read picture signal, and can check the contents.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention] This invention has not formed the display 12 in the same field as a microphone 60 and a loudspeaker 70. Therefore, the large display 12 can be taken.

[0035] Moreover, the microphone and the loudspeaker are arranged on the side face which carried out the S character curved surface, and since it is arranged so that a loudspeaker may approach a lug and a microphone may approach opening most in case a user uses it, it is easy to use them.

[0036] and -- the direction of a display -- a user -- holding -- hard -- a long time -- using it -- **** -- if -- the fatigue -- it may come out -- although -- a loudspeaker 70 and a microphone 60 -- a side face -- **** (ing) -- **** -- since -- a side face -- as width of face is held, it can be telephoned, and since grip width of face is narrow, the fatigue at the time of a user's use can be reduced sharply.

[0037] Moreover, since a display does not become dirty by covering a display 12 on the whole and preparing the protective cover (lid) it was made to appear only as for a display window 21, the clean nature of a display is maintained.

[0038] Furthermore, if it uses for telephone with a FAX function, since it will not carry out hard copy, using the output section of FAX as a display, the need of the device for the hard copy is not carried out.

[0039] And the display is effective in being able to take greatly, since the microphone and the loudspeaker were prepared in the side face, and a user recognizing FAX information.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, in the conventional portable telephone with facsimile, the structure for print-out, the form for the output, etc. were needed, and the maintenance was very troublesome. Then, even if it omits the output section and prepares only a display, it may be difficult to check the detail of image information, since this viewing area is narrow, and in order for a user to check a detail, the need of printing out comes out.

[0014] Moreover, since the display is arranged near the microphone for transmission, it may become dirty busy.

[0015] Then, this invention offers the structure for solving this fault.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

MEANS

[A means to solve invention] It offers the telephone with a display function characterized by to prepare both the voice playback section and the voice-input section in the side face adjacent to this transverse plane while this invention displays the predetermined information on transmission and reception, is equipped with the display which can carry out alter operation of the user, the voice playback section which reproduces the received speech information, and the voice-input section which inputs the speech information to transmit and prepares said display in the transverse plane of a body.

[0017] Moreover, this invention offers the telephone with a display function characterized by to prepare both the voice playback section and the voice input section in the side face which touched this transverse plane and curved S characters while the predetermined information on transmission and reception displays, and a user has the display which can carry out alter operation, the voice playback section which reproduces the speech information which receives, and the voice input section which inputs the speech information which transmits and prepares said display in the transverse plane of a body.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

OPERATION

[Function] This invention prepares a microphone and a loudspeaker in the side face adjacent to the transverse plane in which the display was prepared.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the appearance perspective view of the 1st example of this invention.

[Drawing 2] It is the external view of the 1st example of this invention.

[Drawing 3] It is drawing showing the display of the 1st example of this invention.

[Drawing 4] It is drawing showing the viewing area of the 1st example of this invention.

[Drawing 5] It is drawing showing the busy condition of the 1st example of this invention.

[Drawing 6] It is the appearance perspective view of the 1st conventional example.

[Drawing 7] It is the appearance perspective view of the 2nd conventional example.

[Description of Notations]

12 Display

13 FAX / Telephone Carbon Button

50 Antenna

60 Microphone

70 Loudspeaker

[Translation done.]

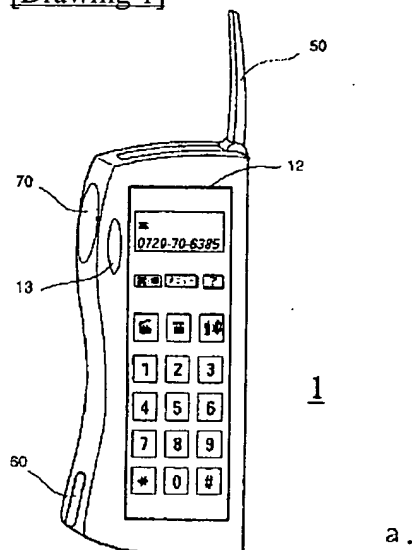
* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

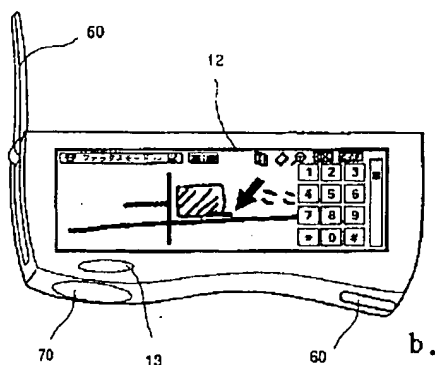
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

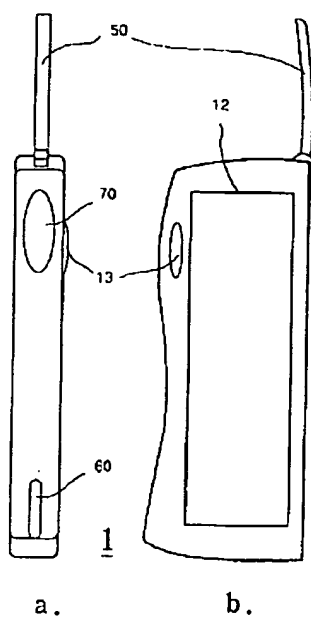
[Drawing 1]



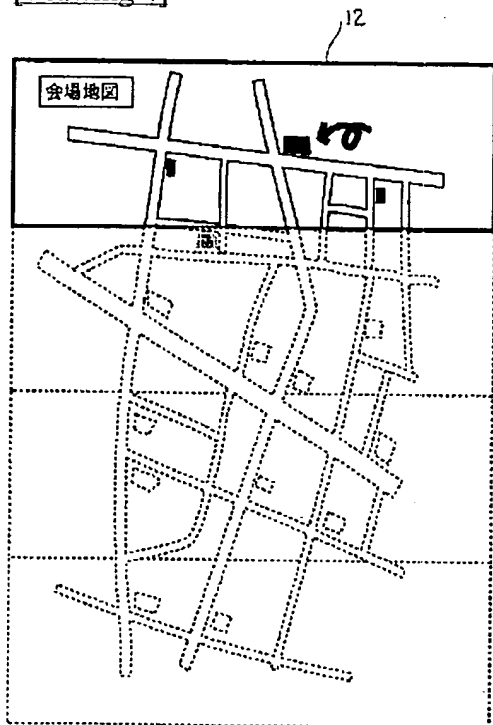
60: microphone
 70: Speaker
 50: Antenna
 13: Fax/telephone button



[Drawing 2]

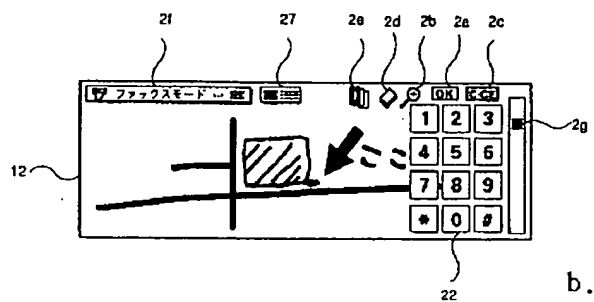
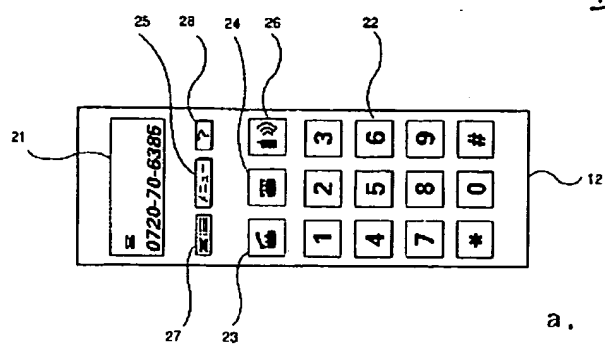


[Drawing 4]



[Drawing 3]

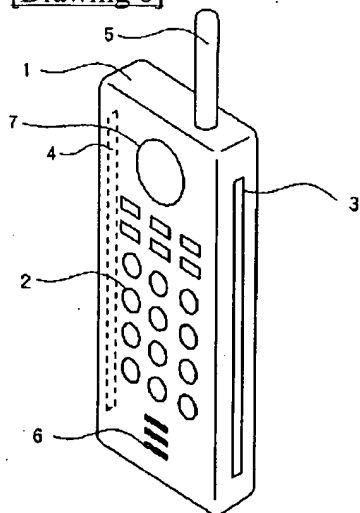
Drawing 3



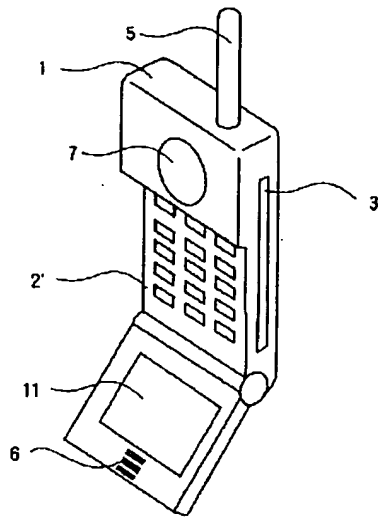
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]